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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/768,374      | 01/22/2001  | Hemal V. Shah        | 10559-370001/P10176 | 2368             |

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| EXAMINER |
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CHANKONG, DOHM

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| ART UNIT | PAPER NUMBER |
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2152

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/768,374

Applicant(s)

SHAH ET AL.

Examiner

Dohm Chankong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/18/05, 5/18/05
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

- 1> This action is in response to careful consideration of the Applicant's amendment and remarks. No new claims have been added.
- 2> This action is a final rejection.

### *Response to Arguments*

- 3> Applicant's arguments with respect to claims 1-7 and 20 have been considered but are moot in view of the new ground(s) of rejection.
- 4> Examiner would like to make two points in regards to the new limitation in claim 1 of "maintaining byte stream order over the first and second protocols."

One, Applicant has argued that the Haviv reference is deficient because it does not maintain the byte stream order during protocol translation. The Applicant cited several sections within the specification in support of his assertion that this is not new matter. However, the sections cited by Applicant are directed towards maintaining the correct sequence of packets. Examiner believes that this is not what is disclosed in the claim.

The new limitation seems directed towards maintaining the byte stream order of each packet as they are translated from one protocol to the next. This feature is not disclosed in the specification.

And second, in constructing the rejection to the claims, Examiner has relied on the specification for guidance. For instance, when some claim 1 discloses translating a packet

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from a first protocol to a second protocol, the protocols comprising transport-layer, connection-oriented, byte stream based protocols, Examiner relied on the specification to help further determine the scope of these protocols. Applicant disclosed Winsock DP as a possible example of the second protocol.

Haviv was utilized to reject the claims based on this disclosure. In particular, Haviv discloses translating TCP/IP (first protocol) packets to transactions, the transactions including socket transactions, and the transactions having a second [Sockets Direct Path which is Winsock DP] protocol [see 0045, 0049, claim 51 where : it is well known in the art that sockets utilize byte streams]. Thus, Haviv's packet translation and functionality is parallel to the functionality of claim 1, and even uses a protocol supported by Applicant's specification. If Applicant asserts that Haviv does not maintain the byte stream order in his translation, Examiner requests further explanation on how his invention is able to maintain the byte stream order of the packets despite having equivalent translation steps.

5> Applicant's arguments in regards to claims 8-19 and 21-30 have been fully considered but they are not persuasive.

6> In regards to claim 8, Applicant has added that the packet comprises a transport-layer control packet that need not be translated to further distinguish over Haviv. However, Haviv discloses that the command can be a HTTP request (for a web page for instance) [see 0058 and 0060]. As is well known in the art, an HTTP request is analogous to a transport-layer control packet.

7> In regards to claims 11, 21 and 28, Applicant has further defined the specified criterion as having to relate to whether a connection that has been established is using a first protocol before translating to a second protocol. In relation to the rest of the claim, this criterion seems to have implicitly been checked. The previous limitation disclosed receiving at a proxy node a first packet from the client using a first protocol. Since the proxy node has received the first packet using a first protocol, this seems to mandate that the connection between the client and the proxy node has been established using the first protocol. That is, whatever protocol that is utilized by the first packet should dictate the protocol of the connection with which the packet was sent. Therefore, the added limitation seems to be merely claiming what is inherent to the functionality of the claim. Appropriate explanation is requested if Applicant believes that Examiner has interpreted the claim language incorrectly.

8> As to claim 19, Applicant has argued that the combination of references to do not disclose "performing load balancing among the proxy nodes based on protocol processing requirements". In regards to this limitation, the rejection relied upon Applicant's disclosure: "at one level, nodes...can perform session-level load balancing on a group of proxy nodes...using network address translation techniques..." [page 28, lines 5-8]. Pursuant to this disclosure, the Squire reference was utilized to teach session level load balancing among Haviv's proxy nodes. Contrary to Applicant's assertions, there is sufficient motivation to combine and reasonable expectation of its success. Haviv discloses a group of proxies in parallel [0055] but does not disclose performing load balancing among them. Squire disclosed

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performing session level (layer 5) load balancing on the incoming packets (based on the information inside them) [column 3 «lines 3-16» | column 4 «lines 13-41»]. Squire also discloses the same exact technique (network address translation) for performing the session-level load balancing as specified in Applicant's disclosure. Combining Haviv and Squire would thus enable session level load balancing among the plurality of Haviv's proxies. Improving network systems with load balancing techniques is quite ubiquitous and expected in the art. Furthermore, Haviv hints at this functionality by suggesting that the load balancing is based on information within the connection request [0036].

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9> Claims 1-7 and 11-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a. Claim 1 has been amended to include new limitations including "maintaining byte stream order over the first and second protocols". After a careful examination of the specification, Examiner concludes that this functionality is not present in the

specification. Applicant cites sections in the specification that is directed towards maintain the order of packets using a queue to store out of order packets (the idea of maintaining packet order is well known in the art, especially concerning TCP). However, this is not analogous to the claimed limitation; according to the argument, Applicant is concerned with maintaining the byte order within each packet as they are translated from one protocol to the next in order to preserve certain streaming semantics. Examiner was unable to find direct support for this functionality within the specification.

b. Claim 11, 21 and 28 have been amended to further limit the criteria that the packet must meet before it is translated. However, after a careful examination of the specification, no description of this feature as it is written was found. The closest functionality was related to receiving a packet, and then determining whether or not a connection has been established before continuing processing; that is, the packet doesn't meet the criteria of whether or not the connection has been established but rather a connection is simply checked to see if it exists before the system continues. Therefore, there is no disclosure for the added limitation as it is written.

c. Claim 19 is directed towards performing load balancing among the proxy nodes based on protocol processing requirements. No description of this feature was found in the disclosure, which related performing "session-level" load balancing at the proxy nodes. This is not equivalent to load balancing based on protocol processing requirements. Session-level load balancing, or Layer-5 load balancing is directed towards performing the load-balancing based on the content of the packet. Load

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balancing based on "protocol processing" suggests a entirely different concept altogether and is not supported by the disclosure.

d. Claim 20 is directed towards load balancing based on application processing requirements. As with claim 19, no description of this was found in the specification.

In regards to load balancing at the second level, Applicant merely discloses

"application level" load balancing. Application level, or layer-7 load balancing works by examining the payload of the packet and is not related to "application processing".

Clarification is requested if Applicant believes Examiner has interpreted the claims (and the supporting disclosure) incorrectly.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10> Claim 8 is rejected under 35 U.S.C § 102(e) as being anticipated by Haviv, U.S Patent Publication No. 2002|0059451.

11> As to claim 8, Haviv discloses a method of protocol processing comprising:



receiving a packet at a proxy node in a system area network from a first node that generated the packet using a first protocol wherein the packet is addressed to a second node in the system area network that uses a second protocol [abstract | Figure 4 | Figure 5 | paragraphs 0014, 0016, 0049, 0053];

processing the packet in the proxy node [paragraph 0053]; and

sending a response from the proxy node to the first node using the first protocol, if said processing results in a determination that the packet comprises a transport-layer control packet that need not be translated and sent to the second node [paragraph 0058 and 0060 : “HTTP request” which results in a web page that is cached in the gateway];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv’s sockets direct protocol (SDP) is analogous to the second protocol].

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12> Claims 1 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv, in view of Garcia et al, U.S Patent No. 6,493,343 [“Garcia”].

13> As to claim 1, Haviv discloses a method comprising:

receiving a packet at a proxy node in a system area network from a first node that generated the packet using a first protocol [abstract | Figure 4 | Figure 5 | paragraphs 0014, 0016];

translating the packet using a second protocol used by a second node [paragraphs 0049, 0053]; and

sending the translated packet from the proxy node to the second node [Figure 1 | paragraphs 0053, 0054];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols, and the proxy node manages first and second endpoints corresponding to the first and second protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol], and the translating comprises relaying a byte stream [claim 41 and 51 where : Haviv discloses translating a TCP byte stream to a socket transaction (byte stream)].

Haviv does not explicitly disclose maintaining byte stream order over the first and second protocols.

14> Garcia discloses maintain in-order packet delivery of packets over multiple paths within a system area network [column 1 «lines 48-60 and 65-67» | column 7 «lines 55-60»]. It would have been obvious to one of ordinary skill in the art to incorporate Garcia's guaranteed in-order delivery of data packets within Haviv's system area network. One would have been

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motivated to provide such functionality into Haviv as the benefits and advantages of in-order delivery are already well known and appreciated in the art.

15> As to claim 6, Haviv discloses the method of claim 1 wherein the first node comprises a network client coupled to the proxy node through a network node, and the second node comprises an application node [Figure 5 «items 52, 54, 56, 66, 70, 72» | paragraphs 0055, 0058 where: the gateway is analogous to a network node and the server is analogous to an application node].

16> As to claim 7, Haviv discloses the method of claim 1 wherein the first node comprises an application node and the second node comprises a network client coupled to the proxy node through a network node [Figure 5 «items 52, 54, 56, 66, 70, 72» | paragraphs 0035, 0051, 0055, 0058 where: Haviv's gateway is analogous to a network node and the server is analogous to an application node].

17> As to claim 11, Haviv discloses a system comprising:  
a system area network comprising a network node, a proxy node, and an application node [Figure 5 «items 52, 54, 56, 66, 70» | paragraphs 0014, 0019, 0053 and 0054 where: Haviv's gateway is analogous to a network node and server is analogous to an application node] and a network client [Figure 5 «item 52» | paragraph 0053];  
wherein the proxy node comprises a processor configured for:

receiving a first packet from the network client through the network node addressed to the application node using a first protocol [paragraphs 0053, 0058]; and

if the first packet meets a specified criterion relating to whether a connection has already been established between the network client and the proxy node using the first protocol, translating the first packet using a second protocol used by the application node, and sending the translated first packet to the application node [paragraph 0053 : where as previously stated in the response, that the connection between the client and the proxy is inherently the first protocol because the proxy has received the first packet using the first protocol];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

18> As to claim 12, Haviv discloses the system of claim 11 wherein the proxy node processor is further configured for processing the first packet if the first packet does not meet the specified criterion [paragraph 0022, 0023 and 0056 where: whether or not the data is received from a trusted client is analogous to the criteria].

19> As to claim 13, Haviv discloses the system of claim 12, wherein the proxy node processor is further configured for sending a response to the network client through the network node using the first protocol, the response being in reply to the first packet if the first packet does not meet the specified criterion [paragraph 0058].

20> As to claim 14, Haviv discloses the system of claim 11 wherein the proxy node processor is further configured for receiving a second packet from the application node addressed to the network client using the second protocol [paragraph 0035, 0049];

if the second packet meets a second criterion, translating the second packet using the first protocol and sending the translated second packet to the network client through the network node [paragraph 0016, 0022, 0053].

21> As to claim 15, Haviv discloses the system of claim 14 wherein the proxy node processor is further configured for processing the second packet if the second packet does not meet the second criterion [paragraphs 0022, 0055 and 0056].

22> As to claim 16, Haviv discloses the system of claim 15, wherein the proxy node processor is further configured for sending a response to the application node using the second protocol, the response being in reply to the second packet if the second packet does not meet the second criterion [paragraphs 0018, 0023, 0028 and 0031].

23> As to claim 18, Haviv discloses the system of claim 11 further comprising a plurality of network clients, and wherein the system area network comprises a plurality of network nodes, a plurality of proxy nodes and a plurality of application nodes, wherein each proxy node [Figure 1 | Figure 5 | paragraphs 0014, 0019, 0054], comprises a respective processor configured for:

received an input packet from one of the network clients through one of the network nodes addressed to a particular one of the application nodes using a first protocol [paragraphs 0053, 0058]; and

if the input packet meets a specified criterion, translating the input packet used by the particular application node, and sending the translated first packet to the particular application node [paragraph 0053].

24> As to claim 21, Haviv discloses an apparatus comprising:

a plurality of network ports [Figure 5 | paragraph 0056]; and

a processor configured for:

receiving through one of the network ports a first packet from a network client through a network node in a system area network that generated the first packet using a first protocol [paragraphs 0053, 0056]; and

if the first packet meets a specified criterion relating to whether a connection has already been established with the network client using the first protocol, translating the first packet using a second protocol used by the application node, and sending the translated first packet through one of the network ports to the application node [paragraphs 0053 and 0056 : where as previously stated in the response, that the connection between the client and the proxy is inherently the first protocol because the proxy has received the first packet using the first protocol];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

25> As to claim 22, Haviv discloses the apparatus of claim 21 wherein the processor is further configured for processing the first packet and sending a response to the network client through the network node using the first protocol if the packet does not meet the specified criterion, the response being in reply to the first packet [paragraph 0058].

26> As to claim 23, Haviv discloses the apparatus of claim 21 wherein the processor is further configured for:

receiving a second packet through one of the network ports from the application node addressed to the network client using the second protocol [Figure 5 «items 54, 56» | paragraph 0035, 0049, 0056];

if the second packet meets a second criterion, translating the second packet using the first protocol and sending the translated second packet to the network client through the network node [paragraph 0016, 0053].

27> As to claim 24, Haviv discloses the apparatus of claim 23 wherein the processor is further configured for processing the second packet and sending a response to the application node using the second protocol if the second packet does not meet the second criterion, the response being in reply to the second packet [paragraphs 0018, 0023, 0028].

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28> As to claim 25, Haviv discloses the apparatus of claim 121, wherein the processor is further configured for performing load balancing among the application nodes connected to the network ports based on application processing requirements [Figure 5 | paragraphs 0021, 0022 and 0036].

29> As to claim 27, Haviv discloses the apparatus of claim 21 wherein the first protocol is based on Transmission Control Protocol/Internet Protocol (TCP/IP) [paragraph 0053].

30> As to claim 28, as it is merely an article that implements the steps of the method of claim 11, it does not teach or further define over the limitations of claim 11. Therefore claim 28 is rejected for the same reasons set forth in claim 11, supra.

31> As to claim 29, as it is merely an article that implements the steps of the methods of claims 12 and 13, it does not teach or further define over the limitations of claims 12 and 13. Therefore claim 28 is rejected for the same reasons set forth in claims 12 and 13, supra.

32> As to claim 30, Haviv discloses the article of claim 28 further comprising instructions for causing the computer system to:

receive a second packet at the proxy node from the application node using the second protocol [paragraphs 0018, 0035];



translate the second packet using the first protocol [paragraphs 0016, 0049 and 0054];  
and  
send the translated second packet to the network client through the network node  
[Figure 1 | paragraphs 0023, 0051].

33> Claims 2 and 3 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv and Garcia, in further view of Ketcham, U.S Patent No. 6,721,334.

34> As to claim 2, Haviv does not specifically disclose the method of claim 1 wherein translating the packet comprises translating a single packet into multiple packets and wherein sending the translated packet comprises sending several translated packets.

35> In a similar field of invention, Ketcham is directed towards aggregating and de-aggregating packets within a router in a network, the router capable of performing protocol translation of the packets. Ketcham discloses a method wherein translating the packet comprises translating a single packet into multiple packets and wherein sending the translated packet comprises sending several translated packets [column 4 «lines 37-46» | column 14 «lines 13-18»]. Ketcham's translation method (de-aggregating a translated packet to multiple packets) enables a single packet to be transmitted to multiple destinations, thereby increasing network communication efficiency between the nodes in the network. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Ketcham's packet translation functionality into Haviv's packet translation method for the obtained advantages

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taught by Ketcham [see Ketcham, column 1 «lines 8-10»]. Furthermore, Haviv discloses that his proxy is enabled with a variety of capabilities, including multiplexing [0043].

36> As to claim 3, Haviv does not specifically disclose the method of claim 1 wherein receiving the packet comprises receiving multiple packets, translating the packet comprises translating the multiple packets into a single packet and sending the translated packet comprises sending the single translated packet.

37> Ketcham discloses receiving the packet comprises receiving multiple packets, translating the packet comprises translating the multiple packets into a single packet and sending the translated packet comprises sending the single translated packet [column 2 «lines 61-67» | column 4 «lines 37-47»]. Ketcham's translation method allows aggregating multiple packets into a single packet, thereby increasing network communication efficiency between the nodes in the network. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Ketcham's packet translation functionality into Haviv's packet translation method for the obtained advantages taught by Ketcham. Furthermore, Haviv discloses that his proxy is enabled with a variety of capabilities, including multiplexing [0043].

38> Claims 4, 5, 9, 10, 17 and 26 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv and Garcia, in view of Speight et al, 4th USENIX Windows Systems Symposium Paper 2000, Pp. 113-124 of the Proceedings, August 3-4, 2000 ["Speight"].

39> Speight was cited by Applicant in the final rejection Office Action, dated 9.2.2004.

40> As to claim 4, Haviv discloses the method of claim 1 wherein the first protocol is based on Transmission Control Protocol/Internet Protocol (TCP/IP) and the second protocol is a system area network protocol [paragraphs 0019, 0049 and 0054 where: Sockets Direct Protocol (SDP) is a known system area network protocol and the VI architecture is an example of system area network architecture] but does not specifically disclose that the second protocol is lightweight.

41> Speight discloses a Windows Socket Direct Lite, a streamlined version of the standard Windows SDP [abstract | "Introduction"]. As is well known in the art, a lightweight protocol increases network performance and efficiency by reducing resource utilization. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Speight's lightweight alternative to Haviv's sockets direct protocol for the stated advantages.

42> As to claim 5, Haviv discloses the method of claim 1 wherein the first protocol is based on a system area network protocol and the second protocol is based on Transmission Control Protocol/Internet Protocol (TCP/IP) [paragraphs 0035, 0038, 0049 and 0054]. Haviv does not specifically disclose a lightweight, system area network.

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43> Speight discloses a Windows Socket Direct Lite, a streamlined version of the standard Windows SDP [abstract | “Introduction”]. As is well known in the art, a lightweight protocol increases network performance and efficiency by reducing resource utilization. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Speight’s lightweight alternative to Haviv’s sockets direct protocol for the stated advantages.

44> As to claims 9 and 10, as they do teach or further define over the limitations of claims 4 and 5, respectively, they are rejected for the same reasons set forth in claims 4 and 5, supra.

45> As to claim 17, as it is merely a system that implements the step of the method of claim 4, it does not teach or further define over the limitations of claim 4. Therefore, claim 17 is rejected for the same reasons set forth in claim 4, supra.

46> As to claim 26, as it is merely an apparatus that implements the step of the method of claim 5, it does not teach or further define over the limitations of claim 5. Therefore, claim 26 is rejected for the same reasons set forth in claim 5, supra.

47> Claim 19 is rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv and Garcia, in view of Squire et al, U.S Patent No. 6.745.243 [“Squire”].

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48> As to claim 19, Haviv discloses the system of claim 18, wherein each network node comprises a processor configured for performing load balancing among the proxy nodes [paragraphs 0033, 0047 and 0055] but does not specifically disclose that the load balancing is based on protocol processing requirements.

49> Squire discloses load balancing based on protocol processing requirements [column 4 «lines 22-41» | column 6 «lines 52-62»] by being able to session-layer load balance network traffic based on layer 5 information for the obtained advantage of improving efficiency and available bandwidth of the network. Haviv discloses a plurality of proxies in parallel [0055]. Therefore it would have been obvious to one of ordinary skill in the art to have implemented Squire's protocol-based load balancing into Haviv to enable appropriate selection of proxies within Haviv's SAN.

50> Claim 20 is rejected as being unpatentable over Haviv, Garcia and Squire, in view of Nelson, U.S Patent No. 6.882.654.

51> As to claim 20, Haviv and Squire disclose the system of claim 19, wherein the proxy node processors are further configured for performing load balancing among the application nodes [paragraphs 0021, 0022 and 0036], but does not disclose load balancing based on application processing requirements.

52> In a related field of invention, Nelson discloses load balancing between nodes in a network based on application processing requirements (application layer or Layer-7) [column 1 «lines 11-15» | column 4 «lines 33-37» | column 8 «lines 43-55»]. Haviv discloses load balancing between the proxies and the application servers based on a predetermined policy and information received in a request. Therefore it would have been obvious to implement Nelson's application-level load balancing into Haviv's load balancing scheme. Application-level load balancing would enable Haviv to load balance between servers based on the content of the packet; such an implementation would be extremely beneficial to Haviv as he discloses utilizing a variety of services and commands [0061].

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

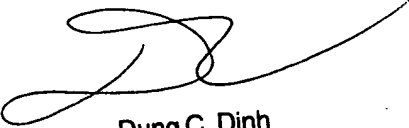
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942.

The examiner can normally be reached on 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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